

EXHIBIT 75

1 UNITED STATES DISTRICT COURT
2 EASTERN DISTRICT OF MICHIGAN
3 SOUTHERN DIVISION
4

5 -----) Civil Action No.:
6 IN RE: FLINT WATER CASES) 5:16-cv-10444-JEL-MKM
7) (consolidated)
8)
9) Hon. Judith E. Levy
10 -----) Mag. Mona K. Majzoub
11

12 HIGHLY CONFIDENTIAL
13 VIDEOTAPED DEPOSITION OF MARC EDWARDS, PH.D.
14

15 FRIDAY, AUGUST 7, 2020
16 Volume 1
17

18 Remote oral deposition of MARC EDWARDS, PH.D.,
19 conducted at the location of the witness in
20 Blacksburg, Virginia, commencing at approximately 9:06
21 a.m., on the above date, before JULIANA F. ZAJICEK, a
22 Registered Professional Reporter, Certified Shorthand
23 Reporter, Certified Realtime Reporter and Notary
24 Public.

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23 THE VIDEOGRAPHER:

MR. ROBERT MARTIGNETTI,

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1 beyond belief and are trying to bullshit their way out
2 of it. So I guess I'd use different words, but...

3 Q. Okay. In your published --

4 MR. CAMPBELL: Alaina, can you bring up that
5 other folder now.

6 BY MR. CAMPBELL:

7 Q. And I'm going to mark as Exhibit 33
8 your -- your paper in Water Research entitled "Lead
9 release to potable water during the Flint, Michigan
10 water crisis as revealed by routine biosolids
11 monitoring data."

12 (WHEREUPON, a certain document was
13 marked Marc Edwards Deposition
14 Exhibit No. 33, for identification,
15 as of 08/07/2020.)

16 BY MR. CAMPBELL:

17 Q. Tell us -- well, first of all, do you
18 recognize that as your paper?

19 A. Yes.

20 Q. This was cutting edge stuff, was it not,
21 Dr. Edwards?

22 A. It was a different approach, yes.

23 Q. What was the purpose of this study?

24 A. Curiosity to figure out how bad things

1 were and when and the trajectory of lead in the water
2 to try to fill in gaps in the record that were created
3 by the failure to monitor lead and water properly
4 under the Lead and Copper Rule, and to all of the
5 above, yeah.

6 Q. Well, let me turn to Paragraph 3.5,
7 "Historical perspectives on the Flint Water Crisis."

8 MR. CAMPBELL: At Page 480, Alaina.

9 BY MR. CAMPBELL:

10 Q. I want to direct your attention to this
11 paragraph.

12 You wrote: "This analysis fills major
13 knowledge gaps regarding the trajectory of the Flint
14 Water Crisis in relation to lead in water and human
15 exposure. In particular, the monthly lead in
16 biosolids reached a peak of 24.5 kilograms during the
17 warmer months (May-October)of the crisis in 2014, but
18 lead release steady" -- "steadily declined thereafter
19 to less than half of that value (11.5 kilograms) for
20 the same period in 2015. Moreover, the average and
21 maximum biosolids lead measurements during the Flint
22 water crisis in 2015 were comparable to those
23 pre-Flint Water Crisis in summer 2012 and summer 2013,
24 suggesting that the water lead levels throughout the

1 City might have declined from the start of the Flint
2 Water Crisis in the summer of 2014 as lead was
3 depleted and sloughed from scale. This analysis
4 strongly suggests that the 'worst' lead exposure
5 during the Flint Water Crisis was restricted to
6 June-August 2014 (captured in biosolids lead mass
7 during July-September 2014), as is further confirmed
8 by the significant elevation in blood lead levels
9 above 5 associated with those months."

10 Did I read that correctly?

11 A. Yes.

12 Q. And was that a -- one of the conclusions
13 of this study?

14 A. Yes.

15 MR. CAMPBELL: So, Alaina, can you put up the --
16 the article from, I think it's Mother Jones.

17 (WHEREUPON, a certain document was
18 marked Marc Edwards Deposition
19 Exhibit No. 34, for identification,
20 as of 08/07/2020.)

21 BY MR. CAMPBELL:

22 Q. Do you remember giving an interview or
23 communicating in some fashion with Kevin Drum of
24 Mother Jones?

1 A. Yes.

2 Q. What -- what exactly is Mother Jones?

3 A. Some kind of a publication, somewhat
4 credible.

5 Q. Okay. And you've -- you've -- you've read
6 this report? Is it -- does it accurately describe
7 your -- your research?

8 A. I think so, yes.

9 Q. Okay. There are two graphs on the
10 page that is before you now in the Mother Jones
11 article.

12 MR. CAMPBELL: Could you bring up the first of
13 the two, Alaina. It's -- it's described -- it is
14 headed "Two Water Emergencies, Flint 2014 vs.
15 Washington, DC 2004."

16 And this is, what, 35?

17 (WHEREUPON, a certain document was
18 marked Marc Edwards Deposition
19 Exhibit No. 35, for identification,
20 as of 08/07/2020.)

21 BY MR. CAMPBELL:

22 Q. Okay. So, Dr. Edwards, can you tell us
23 what -- what we are looking at here?

24 A. Yes. What are we looking at?

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15 MONDAY, AUGUST 10, 2020
16 Volume 2
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18 Continued remote oral deposition of MARC
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20 in Blacksburg, Virginia, commencing at approximately 9:04
21 a.m., on the above date, before JULIANA F. ZAJICEK, a
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1 stuff going into the sewer that is not lead that
2 varies with time and then you have the lead that's
3 coming from the -- the plumbing, right, and so what
4 you are trying to do is -- is ignore the noise, which
5 is all of these factors putting more stuff in the
6 water, and get the thing you care about, which is the
7 mass of lead.

8 Q. Okay. Were you aware that in the
9 months -- in the three months following the switch to
10 the Flint River, the concentration of lead within the
11 bio sludge reported from the wastewater treatment
12 plat -- plant actually went down?

13 A. Yes, we reported that in our -- our
14 results.

15 Q. Okay. Did you ever do an investigation
16 into why the concentration went down, whether or not
17 there were large rain events or if they were putting
18 sludge back in the sewer, as you said, did you ever
19 investigate that?

20 A. Yeah. There were massive rain events. So
21 we -- we have that in the supplemental information of
22 the report.

23 Q. And then you just testified that because
24 of, you know, the noise, as you called it, the signal

1 is the massive lead in the biosolid, correct?

2 A. Correct.

3 Q. Okay. And then I'm going to click on
4 another highlighted portion.

5 You say: "All five metals spiked markedly
6 in the summer of 2014 when there was no corrosion
7 control during the Flint Water Crisis, and it is
8 hypothetically possible that this was due to general
9 sloughing of pre-existing scale from all plumbing
10 surfaces."

11 So, to kind of reduce that down, you are
12 saying because you saw a spike in the total mass of
13 lead during the months following the switch, that was
14 likely from the sloughing of pipes.

15 Am I -- am I summarizing that correctly?

16 A. Yeah. Yeah, I mean, because realize it's
17 possible. One thing that could invalidate this
18 analysis is there is an industry dumping lead into
19 their -- into the sewer, right, for example.

20 So if a lead was -- if an industry was
21 doing that, which we considered possible at the start,
22 the lead from the plumbing, the drinking water
23 plumbing would be less significant and would be
24 confounded, right. And so what we are doing here is

1 saying, Well, it's very unlikely that an industry
2 would -- would not just put lead in the water but also
3 everything else related to plumbing, including
4 these -- these metals.

5 So the fact that they all went up during
6 that time seems highly unlikely that that lead was
7 coming from an industry. So, so we -- yeah, so we
8 then are implying that all of this information is
9 suggesting the lead in the sewer is mainly from the
10 lead in the -- that came from the water plumbing.

11 Q. Okay. And I believe in the article, I
12 don't have it off the top of my head here, but you say
13 that the average lead total mass in the months
14 following was one of the factors, and I think you had
15 it at 317 metric dry tons.

16 Does that sound familiar?

17 A. Yes, absolutely.

18 Q. Okay.

19 A. It was high. Very high.

20 Q. So is it your opinion that the lead was
21 sloughed from the pipes due in part to the fact that
22 that average went up in those three months following
23 the switch?

24 A. Yes, that's -- that's what logic and the

1 evidence strongly suggests.

2 Q. Okay. Isn't it true, though, that there
3 were also spikes in lead mass as a dry weight in the
4 years preceding the switch to the Flint River?

5 A. Yes.

6 Q. Okay. And, in fact, from March to
7 May 2010, it actually averaged 312 metric dry tons.

8 Does that --

9 A. There was a lot of sludge, yeah.

10 Q. Okay. Are you suggesting that that lead
11 mass was caused by sloughing of pipes back in 2010?

12 A. Well, we have realized that -- you know,
13 this is getting more difficult logically and in terms
14 of the projections. So, in other words, we did five
15 sampling events starting August 15 that we were able
16 to correlate our -- our citywide lead and water
17 measurements to lead in the sludge. We got a good
18 correlation.

19 The more you extrapolate back in time, the
20 less confidence you can have. So, you know, trying to
21 go back that far, okay, it's a little bit more iffy.
22 So I'm putting that out there, No. 1.

23 No. 2, when we first looked at that data,
24 we -- we didn't have any reason to think, Why is lead